sition of pharyngeal gonorrhoea and HIV from fellatio,[5] and a study from Amsterdam has shown that between four and nine of 102 homosexual men acquired HIV through orogenital sex.[6] We are concerned that the number of cases of HIV infection transmitted by oral sex alone will increase in the light of our findings. We need to emphasise to the voluntary sector and the public that there is a real risk of transmission of HIV through oral sex and that the use of condoms is advised.

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Screening for asymptomatic *Chlamydia trachomatis* infection in adolescent men by examination of voided urine

Detection of *Chlamydia trachomatis* (CT) in voided urine with enzyme immunoassay (EIA)[1 2] opened possibilities for noninvasive screening of asymptomatic infections. Sensitivity and specificity of direct detection of CT with EIA in urine, compared with cultivation from the urethra, was evaluated in several studies and found to be in the range 59–100% and 93–99·3% respectively.[3 4] In our study the sensitivity and specificity of IDEA-III test in urine from asymptomatic men visiting the STD clinic was 75% and 96·8% respectively.[5] These data seem to be acceptable[4 6] for routine screening of asymptomatic adolescent men.

We performed a study on 547 asymptomatic military recruits (group A) and on 71 adolescent men (group B) attending the youth consultation centre. The average age was 20·2 and 18·0 years respectively. Ten ml of first catch urine was collected and sent chilled to the laboratory. Antigen detection was performed with IDEIA-III (Novo Bio Labs) enzyme immunoassay according to manufacturers instructions. Positive samples and samples in grey-zone (cut-off ± 20%) were verified with FITC monoclonal antibodies (SYVA Direct Specimen test). The samples that were reactive in EIA and positive in the verification test were considered as truly positive.

Contact tracing for partners of CT infected men was performed according to existing legislation.

The results of the screening of military recruits is summarised in the table. Twenty two

Table Result of screening for asymptomatic Chlamydia trachomatis infection in military recruits

Age (Years)	N	EIA reactive	
		Verified positive N	Verified negative N
18	3	0	0
19	151	1*	1*
20	240	9	4 (from which 1*)
21	121	3	1*
22	13	1	1*
>23	19	0	1*
Total	547	14	8

*New urine sample taken for EIA detection—negative result.

urine samples from 547 recruits were reactive in EIA; however, only 14 of these 22 samples were positive even in the verification test (truly positive). Thus prevalence of asymptomatic CT carriers was 2·6%. From five of the recruits with negative verification test results new urine samples were examined, this time with a negative outcome.

Not one of the recruits complained of urethritis symptoms. However, urine deposit of one of the 14 truly positive recruits was very rich in leucocytes; medical examination of this patient revealed nongonococcal urethritis with discharge.

Through contact tracing of the 14 truly positive recruits 17 female sexual partners were identified and medically examined. Five women had signs of genitourinary infection and were given antibiotic treatment for CT infection without laboratory testing. Urethra and cervical samples from twelve contacts were examined in the laboratory and seven women were found CT infected. Thus the prevalence of laboratory verified CT infection in the contact group was 58·3%.

In group B urine samples were obtained from 71 adolescent asymptomatic men. Thirteen samples were EIA reactive and all of them were also positive in the verification test, (prevalence 18·3%). From 16 identified female sexual contacts twelve partners were found positive (prevalence 75%).

Thus screening of 547 recruits in group A and 71 men in group B detected 21 and 25 CT infected persons respectively.

The sensitivity of IDEIA-III in urine specimens from asymptomatic men was estimated to be 75%; thus after correction the real prevalence numbers of group A and B would be 3·9% and 24·4%. The low prevalence in military recruits may reflect the fact that approximately 50% of them had either not experienced sexual intercourse or indicated contact with only one partner.

High prevalence in group B corresponds with the prevalence of asymptomatic patients attending the STD clinic,[5] while in contrast to the recruit group the majority of these men had already begun sexual activity.

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Determinants of hepatitis B virus surface antigen positivity in adults attending sexually transmitted disease clinics in Italy

Chronic carriers of hepatitis B virus (HBV) infection (HBsAg positive subjects) represent the main source of infection in a community and are a population at highly increased risk of developing chronic liver diseases and primary hepatocellular carcinoma. A clear definition of their characterstics may offer the opportunity to focus more specific preventive campaigns. With this perspective we have analysed data from a cross-sectional epidemiological survey of patients attending sexually transmitted diseases (STD) clinics.[1]

Included in this study were subjects who referred themselves for the first time for suspected STD or STD treatment between March 1989 and December 1990 to two STD clinics in Bergamo and Brescia, Lombardy, Northern Italy. At the time of clinical registration, patients were asked to complete a standard questionnaire on their general characteristics and habits. Further, a blood sample was taken to establish the HBsAg status, HIV status, and to perform VDRL and TPHA tests according to standard methods. No subject had clinical or laboratory evidence of acute HBV infection. A total of 588 patients (457 men, 131 women; median age 30 years, range 17–65) agreed to participate. Less than 3% of eligible subjects refused to enter the study. The association between the variables considered and HBsAg serological status was estimated with multivariate odds ratios (OR) and their 95% confidence intervals (CI). Included in the regression equations were terms for age, sex, marital status, number of sexual partners, homosexuality in men, intravenous drug use and, in turn, various indicators of STD history or current infection.

HBsAg positivity was found in 42 subjects (7·1%, 95% CI from 5·2 to 9·9) out of the 588 screened. The prevalence of HBsAg positivity increased with age, from 4·9% in subjects aged 24 years or less to 8·6% in those aged 35 years or more. Compared with subjects aged 24 years or less, the estimated OR was 1·3 for those aged 25–34 and 1·9 for those $\geq$ 35; the trend in risk was however not statistically significant (table). Women tended to have a lower prevalence of infection than men (5·3% *vs* 7·7%), the corresponding OR being 0·4 (95% CI 0·2–0·8). Intravenous drug use was strongly related with the risk of HBsAg positivity: compared with never users, ever users had an estimated OR of positive HBsAg of 4·3 (95% CI 1·9–9·8). The risk of HBsAg positivity increased with the number of reported

Table   Data of 588* patients attending sexually transmitted disease clinics, Italy 1989–1990

	HBsAg status		Multivariate odds
	Negative	Positive	ratio (95% CI)†
Age (years)			
$\leq$ 24	117	6	1‡
25–34	216	16	1·3 (0·5–3·5)
$\geq$ 35	213	20	1·9 (0·6–5·6)
$\chi^2$1 trend			1·69 (p = 0·19)
Sex			
Males	422	35	1‡
Females	124	7	0·4 (0·2–0·8)
Intravenous drug use			
Never	476	30	1‡
Ever	42	10	4·3 (1·9–9·8)
No. sexual partners over the last three years			
0	48	3	1‡
1–2	200	13	1·0 (0·2–4·1)
3–5	125	9	1·2 (0·3–5·3)
$\geq$ 6	95	9	1·4 (0·3–5·8)
$\chi^2$1 trend			1·81 (p = 0·18)
Age at first intercourse			
$\leq$ 17	229	18	1‡
18–20	191	18	0·9(0·4–2·0)
$\geq$ 21	93	6	1·1 (0·4–3·2)
Homosexuality in men			
No	367	29	1‡
Yes	55	6	1·6 (0·8–4·2)
TPHA positive test			
No	484	31	1‡
Yes	62	11	2·6 (1·1–6·3)
VDRL positive test			
No	486	36	1‡
Yes	60	6	0·9 (0·3–2·4)
HIV infection			
No	518	34	1‡
Yes	24	6	2·3 (1·0–6·4)

*In some cases the sum does not add up to the total because of missing values.
†CI indicates confidence interval.
‡Reference category.